REBUTTAL TESTIMONY OF CHRIS KAEMPFER, P.E.

Village of Greendale
Docket No. 3720-WR-107

Q. State your name.

A. My name is Chris Kaempfer.

Q. Did you previously provide rebuttal testimony on behalf of the Village of Greendale in this proceeding?

A. Yes.

Q. What is your relationship to the Greendale Water Utility and what work have you done relative to this application?

A. I serve as a consulting engineer for the Greendale Water Utility. I am currently completing a study for the Utility titled "Village of Greendale Water Supply Study" and I am assisting the Greendale Water Utility evaluate the performance of their high service flow metering system.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide information to allow the use of the correct maximum day demand data in Exhibit 12.7 the "Milwaukee Water Works Cost of Service Study" and Exhibit 12.8 the "Revised Rate Design Proposal" for the Village of Greendale.

Q. Why should the maximum day demands be changed for the Village of Greendale?

A. The maximum day demands that were listed in the Village of Greendale PSC Annual Reports and were used for Exhibit 12.7 the "Milwaukee Water Works Cost of Service Study" and Exhibit 12.8 the "Revised Rate Design Proposal" are not correct.

Q. How was the maximum day demand determined for the Greendale Water Utility for use in Exhibit 12.7 the "Milwaukee Water Works Cost of Service Study" and Exhibit 12.8 the "Revised Rate Design Proposal"?

A. On lines 20, 21, and 22 on Page D12.16, Mr. Andrew Behm stated "I recalculated max day extra-capacity ratios for wholesale customers based on each utility's 2006 through 2008 Annual Reports.

Q. How were the maximum day demands for the Village of Greendale measured in 2006, 2007, and 2008?

A. The maximum day demands for the Village of Greendale were measured using the high service flow metering system. The high service flow metering system measures the discharge of the Greendale Booster Pump Station into the Greendale Water Distribution System. A detailed description of the high service flow metering system is included in Exhibit 10.1. Exhibit 10.1 is a Flow Meter Evaluation Summary Report prepared in July of 2010.

Q. How were the average annual demands for the Village of Greendale measured in 2006, 2007, and 2008?

A. The annual average demands for the Village of Greendale were measured using the Milwaukee Water Works (MWW) primary connection flow meter station. The MWW primary connection flow meter station measures the flow into the Village of Greendale Ground Storage Reservoirs. The Greendale Ground Storage Reservoirs supply the Greendale Booster Pump Station. A detailed description of the MWW primary connection flow meter station is included in Exhibit 10.1.

Q. How did you determine that the maximum day demands listed in the Village of Greendale PSC Annual Report are not correct?

A. A Flow Meter Evaluation was performed to determine the accuracy of the high service flow metering system at the Village of Greendale Booster Pump Station. The Flow Meter Evaluation is described in Exhibit 10.1.

Q. How was the Flow Meter Evaluation performed?

A. The Flow Meter Evaluation was performed by conducting a series of drawdown tests to compare the flow rate values from the high service flow metering system with the flow rates

calculated from the drawdown tests. A detailed description of the Flow Testing Program is included in Exhibit 10.1.

Q. What were the results of the Flow Testing Program?

A. The results of the Flow Testing Program indicated the actual flows from the Greendale Booster Pump Station were approximately 62 percent of the flows indicated by the high service flow metering system. The results of the Flow Testing Program are presented in Exhibit 10.1.

Q. Why wasn't the high service flow metering system providing accurate results?

A. The high service flow metering system was not providing accurate results because it was not calibrated properly. The high service flow metering system appears to be calibrated for a range of 0 to 15.5 mgd. The high service flow metering system should have been calibrated for a range of 0 to 9.5 mgd.

Q. What are the maximum day values that you recommend be used for 2006, 2007, and 2008?

A. We recommend that the maximum day corrected demands summarized in Table 5 of Exhibit 10.1 be used. The corrected maximum day demand for 2006 is 2.186 mgd. The corrected maximum day demand for 2007 is 2.471 mgd and the corrected maximum day demand for 2008 is 2.632 mgd.